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Effectiveness % of antibiotics used on different bacteria isolates from mastitic milk

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Abstract

The study was conducted to investigate the occurrence of bovine mastitis in HilatKuku, Khartoum, to isolate the bacteria responsible for causing the disease and to determine the antimicrobial susceptibility to the related bacteria. Fifty samples of mastitis milk from fifty dairy cows were collected and transported to Microbiology Laboratory of The College of Veterinary Medicine – Sudan University of Science Technology. Isolation and identification of the bacteria from the collected mastitic milk was undertaken. The results revealed high prevalence of *Staphylococcus aureus* 48% followed by *Streptococcus agalactiae* 28%, *Proteus spp.* 12%, *Staphylococcus hyicus* 8% and *Streptococcus dysgalactiae* 4%. Three types of inflammation were detected, acute mastitis with high prevalence (66%) followed by chronic mastitis (32%) and gangrenous mastitis (2%). *Staphylococcus aureus* was found to infect one quarter causing chronic mastitis and sometimes acute mastitis. *Staphylococcus hyicus* was found to infect one quarter causing chronic and acute mastitis. *Streptococcus agalactiae* was found to infect one quarter causing acute and chronic mastitis. *Streptococcus dysgalactiae* was found to infect more than two quarters causing acute mastitis. While *Proteus spp.* involved the four quarters causing mainly acute mastitis. The effective antibiotics used during this study against most of the isolated bacteria were Gentamycin, Amikacin, Chloramphincol, Oflaxacin and Ciprofloxacin. Some isolates showed resistant to some antibiotics which were Penicillin, Ampicillin, Cefotaxime, Cloxacillin and Gatifloxacin.
Histopathological changes of the examined parenchymal tissue showed parenchymal damage and formation of abscesses. Seven samples from the ten examined parenchymal tissues showed necrosis of the mammary gland. These were mostly caused by *Staphylococcus aureus* causing chronic mastitis. Two samples showed hemorrhagic interstitial tissue mainly caused by *E. coli* and *Streptococcus spp.* causing acute mastitis. Only one sample showed necrotic alveoli in the parenchymal tissue due to gangrenous type of inflammation.
ملخص الطرح

أجريت هذه الدراسة لعزل البكتيريا المسببة لالتهاب الضرر في حلة كوكو، ولاية الخرطوم، ومعرفة المضادات الحيوية المناسبة لتلك البكتيريا.

جمع 50 عينة من 50 بقرة مصابة بالتهاب الضرر حيث تم تحليلها بمعمل الاحياء الدقيقة تكليفة الطب البيطري جامعة السودان للعلوم والتكنولوجيا.

وضعت النتائج وجود البكتيريا موجبة الجيريايمي Staphylococcus aureus بنسبة 48%، و Streplococcus agalactiae بنسبة 28%، و يوجد Streplococcus dysgalactiae بنسبة 8%، و يوجد Streplococcus hyicus بنسبة 4%.

البكتيريا العصوية سالبة الجرام بنسبة 12%.

تم تحديد ثلاثة أنواع من التهاب الضرر، التهاب الضرر الحاد بنسبة 66%، التهاب الضرر المزمن بنسبة 32%، و التهاب الضرر الغانغريجي بنسبة 2%.

وضعت الدراسة أن البكتيريا العنقودية Staphylococci قد اصابت ربع واحد من الضرر، مسببة التهاب الضرر الحاد والمزمن. بينما اصابت البكتيريا S. dysgalactiae 82% من الضرر، مسببة التهاب الضرر الحاد وأصابت البكتيريا S. hyicus كل الضرر مسببة التهاب الضرر الحاد.
تم إجراء اختبار الحساسية للبكتيريا المعزولة حيث أظهرت معظم البكتيريا
حساسيةً للعقاقير، و بينهم: أظهرت البكتيريا مقاومةً للعقاقير Ciprofloxacin و Oflaxacin و Gentamycin و Amikacin و Chloramphinicol و Gentamycin و Amikacin و Chloramphinicol و Oflaxacin و Ciprofloxacin و Gatifloxacin و Penicillin و Ampicillin و Cefotaxime و Cloxacillin و Ciprofloxacin و Gatifloxacin و Penicillin و Ampicillin و Cefotaxime و Cloxacillin تحم في حيحص 10 عيبات من النسج الضرع، أظهرت تغيير في متحدة الانسجة وتكييف خراجات...

أظهرت النتائج أن 7 من العينات بها تحجر في الغدد اللبية مسببة التهاب الضرع، المتزم، وتكون غالباً بسبب Staphylococcus aureus و E. coli و Streptococcus spp

في الاستئاخ اللبية على متحدة الضرع، أظهرت التهاب الضرع مسببة التهاب الضرع بالغامغرية...